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William T. Newport

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IBM CORPORATION, INTELLECTUAL PROPERTY LAW  
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EXAMINER

MERCHANT, SHAHID R

ART UNIT

PAPER NUMBER

3694

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/824,055	<b>Applicant(s)</b> NEWPORT, WILLIAM T.	
	<b>Examiner</b> SHAHID R. MERCHANT	<b>Art Unit</b> 3694	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 June 2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                        | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Status of the Claims***

1. This action is in response to the amendment filed on June 15, 2010.
  - Claims 1-20 are pending.
  - Claim 1 has been amended.

### ***Response to Arguments***

2. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Objections***

3. Claim 12 objected to because of the following informalities: computer-readable medium. Applicant is advised to recite a "tangible" or "non-transitory" computer readable medium in the preamble of the claim. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claims 1-20 rejected under 35 U.S.C. 103(a) as being unpatentable over Serkin et al, U.S. Patent Application Publication 2003/0229567 (see PTO-892, Ref. A) in view of Lele, U.S. Patent No. 7,181,524 (see PTO-892, Ref. D).

6. As per claim 1, Serkin teaches a computer-implemented method for dynamically scaling order processing in a securities exchange, comprising:

maintaining, in a memory device, one or more books for a security at the securities exchange, wherein the one or more books each list orders related to the security (see paragraph 31);

monitoring a volume of orders related to the security received at the securities exchange (see paragraph 47);

varying the number of books maintained for the security based on the monitored volume of orders (see paragraph 47);

distributing orders related to the security and received at the securities exchange among the books maintained for the security (see paragraphs 45-47); and

balancing the monitored order volume among the books, as stored in the memory device (see abstract and paragraphs 33-34).

Serkin does not explicitly teach monitoring, by operation of an application program executing on one or more processors.

Lele explicitly teaches monitoring, by operation of an application program executing on one or more processors (see column 2, lines 42-67, column 3, lines 1-28, column 7, lines 65-67 and column 8, lines 1-13).

Therefore, it would be prima facie obvious to a person of ordinary skill in the art at the time of the invention to combine the teachings of Serkin and Lele to have computer software balance the monitored order volume among the books because it would increase the efficiency of the securities exchange by processing orders faster as taught by Lele (see column 1, lines 47-49). See ***KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385 (2007)**.

7. As per claim 2, Serkin and Lele teach the method of claim 1 as described above. Serkin further teaches wherein varying the number of books maintained for the security based on the monitored volume of orders comprises:

upon determining if the monitored volume of orders related to the security exceeds a maximum threshold value (see paragraph 47);

opening a new book for the security (see paragraph 47).

8. As per claim 3, Serkin teaches the method of claim 2 as described above. Serkin further teaches wherein opening a new book for the security comprises creating a logical partition (see paragraph 47).

9. As per claim 4, Serkin teaches the method of claim 2 as described above. Serkin further teaches wherein opening a new book for the security comprises allocating one or more processors to the new book (see paragraphs 46-47).

10. As per claim 5, Serkin teaches the method of claim 2 as described above. Serkin further teaches wherein varying the number of books maintained for the security based on the monitored volume of orders further comprises:

upon determining if the monitored volume of orders related to the security falls below a minimum threshold value (see paragraphs 46-47);

closing one or more books maintained for the security (see paragraphs 46-47).

11. As per claim 6, Serkin teaches the method of claim 5 as described above. Serkin further teaches wherein the maximum threshold value and the minimum threshold values are different (see paragraph 47).

12. As per claim 7, Serkin and Lele teach the method of claim 1 as described above. Serkin further teaches wherein maintaining one or more books for the security at the exchange comprises maintaining at least one book for the security on at least two different servers (see paragraph 46).

13. As per claim 8, Serkin and Lele teach the method of claim 1 as described above. Serkin further teaches wherein monitoring the volume of orders related to the security received at the exchange comprises dividing the total volume of orders related to the security received at the exchange by the number of books maintained for the security (see paragraphs 31 and 45-47).

14. As per claim 9, Serkin and Lele teach the method of claim 1 as described above. Serkin further teaches further comprising publishing the top of each book maintained for the security (see paragraphs 3, 5, 36, 37 and 42).

15. As per claim 10, Serkin teaches the method of claim 9 as described above. Serkin further teaches further comprising matching an order listed on one of the books maintained for the security with one of the other books maintained for the security (see paragraphs 40, 41 and 43).

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16. As per claim 11, Serkin teaches the method of claim 9 as described above.

Serkin further teaches further comprising matching an order listed on one of the books maintained for the security with a book maintained for the security at another exchange (see paragraph 32).

17. As per claim 12, Serkin teaches a method comprising maintaining one or more books for a security at the securities exchange, wherein the one or more books each list orders related to the security; monitoring a volume of orders related to the security received at the securities exchange; varying the number of books maintained for the security based on the monitored volume of orders; and distributing orders related to the security and received at the securities exchange among the books maintained for the security (see abstract and paragraphs 31, 45-47).

Serkin does not explicitly teach a computer-readable medium containing a program wherein the program is configured to balance the monitored order volume among the books.

Lele explicitly teaches a computer-readable medium containing a program wherein the program is configured to balance the monitored order volume among the books (see column 2, lines 42-67, column 3, lines 1-28, column 7, lines 65-67 and column 8, lines 1-13).

Therefore, it would be prima facie obvious to a person of ordinary skill in the art at the time of the invention to combine the teachings of Serkin and Lele to have computer software balance the monitored order volume among the books because it

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would increase the efficiency of the securities exchange by processing orders faster as taught by Lele (see column 1, lines 47-49).

18. As per claim 13, Serkin and Lele teach the computer-readable of claim 12 as described above. Serkin further teaches wherein varying the number of books maintained for the security based on the monitored volume of orders comprises: upon determining if the monitored volume of orders related to the security exceeds a maximum threshold value, notifying an administrator and providing the administrator with an interface allowing the administrator to open a new book (see paragraph 47).

19. As per claim 14, Serkin and Lele teach the computer-readable of claim 12 as described above. Serkin further teaches wherein varying the number of books maintained for the security based on the monitored volume of orders comprises: upon determining if the monitored volume of orders related to the security exceeds a maximum threshold value, opening a new book for the security (see paragraph 47).

20. As per claim 15, Serkin and Lele teach the computer-readable of claim 12 as described above. Serkin further teaches comprising providing an interface allowing an administrator to specify the maximum threshold value (see paragraph 47).

21. As per claim 16, Serkin and Lele teach the computer-readable of claim 12 as described above. Serkin further teaches providing an interface allowing an administrator to specify how orders related to the security and received at the exchange should be distributed among the books maintained for the security (see paragraphs 31 and 45-47).

22. As per claim 17, Serkin teaches a computer system capable of dynamically allocating resources for processing orders related to a security, comprising:



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a processor;

one or more books maintained for the security by a securities exchange, each book listing orders related to the security; and

a memory containing an executable component, which when executed on the processor, is configured to:

monitor a volume of orders related to the security received by the securities exchange,

vary the number of books maintained for the security based on the monitored volume of orders,

distribute orders related to the security and received by the securities exchange among the books maintained for the security, and

balance the monitored order volume among the books (see abstract and paragraphs 31, 45-47).

Serkin does not explicitly teach an executable component configured to balance the monitored order volume among the books.

Lele explicitly teaches an executable component configured to balance the monitored order volume among the books (see column 2, lines 42-67, column 3, lines 1-28, column 7, lines 65-67 and column 8, lines 1-13).

Therefore, it would be prima facie obvious to a person of ordinary skill in the art at the time of the invention to combine the teachings of Serkin and Lele to have computer software balance the monitored order volume among the books because it

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would increase the efficiency of the securities exchange by processing orders faster as taught by Lele (see column 1, lines 47-49).

23. As per claim 18, Serkin and Lele teach the computer system of claim 17 as described above. Serkin further teaches wherein the one or more books maintained for the security at the exchange comprises:

at least a first book for the security maintained on a first server; and

at least a second book for the security maintained on a second server (see paragraph 46).

24. As per claim 19, Serkin and Lele teach the computer system of claim 17 as described above. Serkin further teaches wherein the one or more books are maintained on a computer system having multiple logical partitions (see paragraph 47).

25. As per claim 20, Serkin and Lele teach the computer system of claim 19 as described above. Serkin further teaches wherein each book is assigned to a different logical partition (see paragraph 47).

### ***Conclusion***

26. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. SecureWay Network Dispatcher User's Guide.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SHAHID R. MERCHANT whose telephone number is (571)270-1360. The examiner can normally be reached on First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James P. Trammell can be reached on 571-272-6712. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Shahid R Merchant/  
Examiner, Art Unit 3694